



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

## NOTICE OF ALLOWANCE AND FEE(S) DUE

63710 7590 09/30/2011  
INNOVATION DIVISION  
CANTOR FITZGERALD, L.P.  
110 EAST 59TH STREET (6TH FLOOR)  
NEW YORK, NY 10022

EXAMINER

ALI, HATEM M

ART UNIT

PAPER NUMBER

3691

DATE MAILED: 09/30/2011

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/699,859

10/31/2003

Howard W. Lutnick

02-1078

5126

TITLE OF INVENTION: ELECTRONIC SYSTEMS AND METHODS FOR PROVIDING A TRADING INTERFACE WITH ADVANCED FEATURES

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1740	\$300	\$0	\$2040	12/30/2011

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.**

**THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.**

### HOW TO REPLY TO THIS NOTICE:

#### I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.**

# **PART B - FEE(S) TRANSMITTAL**

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
or Fax (571)-273-2885**

**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

63710 7590 09/30/2011  
INNOVATION DIVISION  
CANTOR FITZGERALD, L.P.  
110 EAST 59TH STREET (6TH FLOOR)  
NEW YORK, NY 10022

## **Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/699,859 10/31/2003 Howard W. Lutnick 02-1078 5126

TITLE OF INVENTION: ELECTRONIC SYSTEMS AND METHODS FOR PROVIDING A TRADING INTERFACE WITH ADVANCED FEATURES

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
-------------	--------------	---------------	---------------------	----------------------	------------------	----------

nonprovisional NO \$1740 \$300 \$0 \$2040 12/30/2011

EXAMINER	ART UNIT	CLASS-SUBCLASS
----------	----------	----------------

ALI, HATEM M 3691 705-039000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.  
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 \_\_\_\_\_  
(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 \_\_\_\_\_  
3 \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee  
☐ Publication Fee (No small entity discount permitted)  
☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s); (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.  
☐ Payment by credit card. Form PTO-2038 is attached.  
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_ Date \_\_\_\_\_

Typed or printed name \_\_\_\_\_ Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,859	10/31/2003	Howard W. Lutnick	02-1078	5126

63710 7590 09/30/2011  
INNOVATION DIVISION  
CANTOR FITZGERALD, L.P.  
110 EAST 59TH STREET (6TH FLOOR)  
NEW YORK, NY 10022

EXAMINER
----------

ALI, HATEM M

ART UNIT	PAPER NUMBER
----------	--------------

3691

DATE MAILED: 09/30/2011

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 513 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 513 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

## Privacy Act Statement

**The Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/699,859	LUTNICK ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	HATEM ALI	3691	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 7/05/2011.
2. ☒ The allowed claim(s) is/are 1-7,9-11,20 and 31-55.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).  
\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.  
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached  
1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.  
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.  
**Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |  |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application                      |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                               | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                    |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material         | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|  | 9. <input type="checkbox"/> Other _____.   |

/HANI M KAZIMI/  
Primary Examiner, Art Unit 3691

## DETAILED ACTION

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 7/05/2011 has been entered.

2. This communication is in response to the application filed on **10/31/2003**, amended and added new claims on **1/20/2011** and RCE with IDS on **7/05/2011**

## EXAMINER'S AMENDMENT

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with **Ruth J. Ma** on 08/15/11.

4. **Claim 1:** (amended) An apparatus comprising:

a display device that simultaneously displays a plurality of quadrants in a single viewing region, in which each quadrant displays a benchmark issue and a plurality of non-benchmark issues related to the benchmark issue;

a keyboard that comprises:

(1) a first plurality of keys, in which a first key of the first plurality of keys corresponds to a first benchmark issue and a second key of the first plurality of keys corresponds to a second benchmark issue;

(2) a second plurality of keys, in which each key of the second plurality of keys corresponds to an order for a non-benchmark issue; and

a computing device that is coupled to the display device, the keyboard and a non-transitory machine readable medium, in which the non-transitory machine readable medium stores instructions which, when executed by the computing device, ~~direct the computing device to:~~

in response to the first key being pressed:

(1) selecting a first quadrant of the plurality of simultaneously displayed quadrants, in which the first quadrant displays the first benchmark issue;

(2) mapping the second plurality of keys such that each key of the second plurality of keys corresponds to a non-benchmark issue that is related to the first benchmark issue; and

(3) placing an order for the non-benchmark issue in response to one of the second plurality of keys being pressed after the first key being pressed;

in response to the second key being pressed after the first key was pressed:

(1) switching, from the first quadrant, to select a second quadrant of the plurality of simultaneously displayed quadrant, in which the second quadrant displays the second benchmark issue; and

(2) re-mapping the second plurality of keys such that each key of the second plurality of keys corresponds to a non-benchmark issue related to the second benchmark issue that is displayed in the second quadrant.

**Claim 2:** (amended) The apparatus of claim 1, in which the keyboard comprises: a price improvement key, and in which the computing device is directed to:

improves a market price for the selected non-benchmark issue and places the order with the improved market price in advance of other orders in a trading stack in response to the price improvement key being pressed.

**Claim 3:** (amended) The apparatus of claim 1, in which the keyboard comprises: a key that provides direct dealing functionality.

**Claim 4:**(amended) The apparatus of claim 1, in which the computing device is further directed to: direct the display device to display information for each of the non-benchmark issue in the selected first quadrant.

**Claim 5:**(amended) The apparatus of claim 4, in which the selected first quadrant includes a Treasury swaps trading quadrant.

**Claim 6:** The apparatus of claim 5, in which the Treasury swaps trading quadrant includes at least three of the most recent benchmark issues.

**Claim 7:** (amended) The apparatus of claim 4, in which the selected first quadrant includes an off-the-run trading quadrant.



**Claim 8:** (cancelled)

**Claim 9:**(amended) The apparatus of claim 4, in which the selected first quadrant includes a yield curve trading quadrant.

**Claim 10:**(amended) The apparatus of claim 4, in which the selected first quadrant includes a basis trading quadrant.

**Claim 11:** (currently amended) The apparatus of claim 4, in which the selected first quadrant is includes a limit orders trading quadrant.

**Claim 12-19:** (cancelled)

**Claim 20:** (amended) The apparatus of claim 1, in which the computing device - is further directed to:

receive real-time direct dealing content related to at least one non-benchmark issue and trading information related to the at least one non-benchmark issue, in which the direct dealing content comprises at least one of:

a request for a quote,

a response with a price,

a cancel to a response,

an amendment to a response, and

an acceptance of a response, and in which the trading information comprises limit order data for the non- benchmark issue.

**Claim 21-30:** (cancelled)

**Claim 31:**(amended) The apparatus of claim 20, in which the computing device is further configured directed to:

Art Unit: 3691

simultaneously display in the first quadrant:

the trading information related to the non-benchmark issue; and

a ticker that displays the received real-time direct dealing content related to the non-benchmark issue.

**Claim 32:** (amended) The apparatus of claim 31, in which the computing device is further configured directed to:

receive a midprice order to buy or sell the non-benchmark issue at a price within a spread market; and

update the displayed direct dealing content in the ticker to include the midprice order to buy or sell the non-benchmark issue.

**Claim 33:** The apparatus of claim 31, in which the ticker includes at least one request that includes an orientation and a size.

**Claim 34:** The apparatus of claim 31, in which the ticker includes at least one response that includes an orientation and a size.

**Claim 35:** (amended) A method comprising:

simultaneously displaying via a display device a plurality of quadrants in a single viewing region, in which each quadrant displays a benchmark issue and a plurality of non-benchmark issues related to the benchmark issue;

in response to a first key being pressed, selecting, via a processor, a first quadrant of the plurality of simultaneously displayed quadrants, in which the first quadrant displays a first benchmark issue;

in response to the first key being pressed, mapping via the processor a plurality of keys such that each key corresponds to a non-benchmark issue related to the first benchmark issue;

using the processor, placing an order for the non-benchmark issue in response to one of the plurality of keys being pressed after the first key was pressed;

in response to a second key being pressed after the first key was pressed:

switching, via the processor, from the first quadrant to a second quadrant of the plurality of simultaneously displayed quadrant, in which the second quadrant displays a second benchmark issue; and

re-mapping, via the processor, the plurality of keys such that each key corresponds to a non-benchmark issue related to the second benchmark issue that is displayed in the second quadrant.

**Claim 36:**(amended) The method of claim 35 further comprising:

receiving an indication that a price improvement key of the keyboard has been pressed, in which the price improvement key corresponds to improving a market price for the selected non-benchmark issue; and

in response to receiving the indication, placing the order with the improved market price in advance of other orders in a trading stack.

**Claim 37:** The method of claim 35 further comprising: providing direct dealing functionality.

**Claim 38:** The method of claim 35 further comprising: displaying information for each of the non-benchmark issue in the selected first quadrant.

**Claim 39:** (amended) The method of claim 38, in which the selected first quadrant includes a Treasury swaps trading quadrant.

**Claim 40:** The method of claim 39, in which the Treasury swaps trading quadrant includes at least three of the most recent benchmark issues.

**Claim 41:** (amended) The method of claim 38, in which the selected first quadrant includes an off-the-run trading quadrant.

**Claim 42:** (amended) The method of claim 38, in which the selected first quadrant includes a yield curve trading quadrant.

**Claim 43:** (amended) The method of claim 38, in which the selected first quadrant includes a basis trading quadrant.

**Claim 44:** (amended) The method of claim 38, in which the selected first quadrant includes a limit orders trading quadrant.

**Claim 45** amended) The method of claim 35 further comprising:  
receiving real-time direct dealing content related to the non-benchmark issue and trading information related to the non-benchmark issue, in which the direct dealing content comprises at least one of:

a request for a quote,

a response with a price,

a cancel to a response,

an amendment to a response, and

an acceptance of a response, and in which the trading information comprises limit order data for the non- benchmark issue.

**Claim 46:** The method of claim 45 further comprising simultaneously displaying in the first quadrant: the trading information related to the non-benchmark issue; and a ticker that displays the received real-time direct dealing content related to the non-benchmark issue.

**Claim 47:** (amended) The method of claim 46 further comprising: receiving a midprice order to buy or sell the non-benchmark issue at a price within a spread market; and

updating the displayed direct dealing content in the ticker to include the midprice order to buy or sell the non-benchmark issue.

**Claim 48:** The method of claim 46, in which the ticker includes at least one request that includes an orientation and a size.

**Claim 49:** The method of claim 46, in which the ticker includes at least one response that includes an orientation and a size.

**Claim 50:** (new) The apparatus of claim 1, in which the keyboard further comprises a direct dealing key; and in which the computing device is further directed to: in response to the direct dealing key being pressed before the second key and after the first key, transmitting a request for a submission of orders for the non-benchmark issue at a midpoint price of a current spread for orders of the non-benchmark issue; and receiving at least one order in response to the request, and directing the display device to display the at least one order.

**Claim 51:** (new) The apparatus of claim 50, in which displaying the at least one order includes displaying a plurality of orders through a ticker in the first quadrant in response to the orders being placed.

**Claim 52:** (new) The apparatus of claim 1, in which the keyboard further comprises a price improvement key; and in which the computing device is further directed to: in response to the price improvement key being pressed before the second key and after the first key, placing the order having a price that places the order at a front of an order stack of orders for the non-benchmark issue.

**Claim 53:** (new) The method of claim 35, further comprising: in response to a direct dealing key being pressed before the second key and after the first key, transmitting a request for a submission of orders for the non-benchmark issue at a midpoint price of a current spread for orders of the non-benchmark issue; and receiving at least one order in response to the request, and directing the display device to display the at least one order.

**Claim 54:** (new) The method of claim 53, in which displaying the at least one order includes displaying a plurality of orders through a ticker in the first quadrant in response to the orders being placed.

**Claim 55:** (new) The method of claim 35, further comprising: in response to a price improvement key being pressed before the second key and after the first key, placing the order having a price that places the order at a front of an order stack of orders for the non- benchmark issue.

5. The **Allowable** subject matter:

**Claims: 1-7, 9-11, 20, and 31-55 are allowed.**

6. The following is an **examiner's statement of reasons** for the indication of allowance:

Independent **claims 1**, and **35** and their dependent claims **2-7, 9-11, 31-34, and 36-55** respectively are allowed because the closest prior art of record and references of **Fraser et al (5, 95, 94)** in view of **Kerwin et al (2002/0029180)**, **Sweeting (2006/0229967)** and **Kemp et al (7, 389,268)** in any combination did not teach or render obvious to one of ordinary skill in the art:

An apparatus comprising:

a display device that simultaneously displays a plurality of quadrants in a single viewing region, in which each quadrant displays a benchmark issue and a plurality of non-benchmark issues related to the benchmark issue;

a keyboard that comprises:

(1) a first plurality of keys, in which a first key of the first plurality of keys corresponds to a first benchmark issue and a second key of the first plurality of keys corresponds to a second benchmark issue;

(2) a second plurality of keys, in which each key of the second plurality of keys corresponds to an order for a non-benchmark issue; and a computing device that is coupled to the display device, the keyboard and a non-transitory machine readable

Art Unit: 3691

medium, in which the non-transitory machine readable medium stores instructions which, when executed by the computing device, ~~direct the computing device to:~~

in response to the first key being pressed:

(1) selecting a first quadrant of the plurality of simultaneously displayed quadrants, in which the first quadrant displays the first benchmark issue;

(2) mapping the second plurality of keys such that each key of the second plurality of keys corresponds to a non-benchmark issue that is related to the first benchmark issue; and

(3) placing an order for the non-benchmark issue in response to one of the second plurality of keys being pressed after the first key being pressed;

in response to the second key being pressed after the first key was pressed:

(1) switching, from the first quadrant, to select a second quadrant of the plurality of simultaneously displayed quadrant, in which the second quadrant displays the second benchmark issue; and

(2) re-mapping the second plurality of keys such that each key of the second plurality of keys corresponds to a non-benchmark issue related to the second benchmark issue that is displayed in the second quadrant.

7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."



Art Unit: 3691

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HATEM ALI whose telephone number is (571)270-3021.

The examiner can normally be reached on 8.00 to 6.30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ALEXANDER KALINOWSKI can be reached on 571-272-6771. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/HANI M KAZIMI/  
Primary Examiner, Art Unit 3691

HATEM ALI  
Examiner  
Art Unit 3691